Drive does not start, no error code displayed

- If the display does not light up, check the power supply to the drive (ground and input phases connection, see page 20).
- The assignment of the "Fast stop" or "Freewheel" functions will prevent the drive starting if the corresponding logic inputs are not powered up. The ATV12 then displays nSt in freewheel stop and FSt in fast stop, it will display rdY en freewhell stop. This is normal since these functions are active at zero so that the drive will be stopped if there is a wire break. Assignment of LI to be checked in CONF/FULL/FUn-/Stt- menu.
- Make sure that the run command input(s) is activated in accordance with the selected control mode (parameters Type of control tCC page 48 and 2 wire type control tCt page 51, in CONF/FULL/ I_O- menu).
- If the reference channel or command channel is assigned to Modbus, when the power supply is connected, the drive displays "nSt" freewheel and remain in stop mode until the communication bus sends a command.
- In factory setting "RUN" button is inactive. Adjust parameters Reference channel 1 Fr I page 62 and Command channel 1 Cd I page 63 to control the drive locally (CONF/FULL/CtL- menu). See How to control the drive locally page 46.

Fault detection codes that cannot be cleared automatically

The cause of the detected fault must be removed before clearing by turning off and then on.

SOF and tnF faults can also be cleared remotely by means of a logic input (parameter Detected fault reset assignment rSF page 91 in CONF/FULL/FLt- menu).

Code	Name	Possible causes	Remedy
CrF1	Precharge	• Charging relay control fault or charging resistor damaged	• Turn the drive off and then back on again • Check the connections • Check the stability of the main supply • Contact your local Schneider Electric representative
InF1	Unknown drive rating	• The power card is different from the card stored	• Contact your local Schneider Electric representative
InF2	Unknown or incompatible power board	• The power card is incompatible with the control card	• Contact your local Schneider Electric representative
InF3	Internal serial link	• Communication interruption between the internal cards	• Contact your local Schneider Electric representative
InF4	Invalid industrialization zone	• Inconsistent internal data	• Contact your local Schneider Electric representative
InF9	Current measurement circuit	• Current measurement is not correct due to hardware circuit	• Contact your local Schneider Electric representative
----	Problem of application Firmware	• Invalid application firmware update using the Multi-Loader tool	• Flash again the application firmware of the product
InFb	Internal thermal sensor detected fault	• The drive temperature sensor is not operating correctly • The drive is in short circuit or open	• Contact your local Schneider Electric representative
InFE	Internal CPU	• Internal microprocessor	• Turn the drive off and then back on again • Contact local Schneider Electric representative

Fault detection codes that cannot be cleared automatically (continued)

Code	Name	Possible causes	Remedy
OCF	Overcurrent	• Parameters in the Motor control menu drC- page 57 are not correct • Inertia or load too high • Mechanical locking	• Check the parameters • Check the size of the motor/drive/load • Check the state of the mechanism • Connect line chokes • Reduce the Switching frequency SFr page 59 • Check the ground connection of drive, motor cable and motor insulation.
SCF1	Motor short circuit	• Short-circuit or grounding at the drive output • Ground fault during running status • Commutation of motors during running status • Significant current leakage to ground if several motors are connected in parallel	• Check the cables connecting the drive to the motor, and the motor insulation • Connect motor chokes
SCF3	Ground short circuit		
SCF4	IGBT short circuit	• Internal power component short circuit detected at power on	• Contact your local Schneider Electric representative
SOF	Overspeed	• Instability • Overspeed associated with the inertia of the application	• Check the motor • Overspeed is 10% more than Maximum frequency tFr page 57 so adjust this parameter if necessary • Add a braking resistor • Check the size of the motor/drive/load • Check parameters of the speed loop (gain and stability)
tnF	Auto-tuning	• Motor not connected to the drive • One motor phase loss • Special motor • Motor is rotating (being driven by the load, for example)	• Check that the motor/drive are compatible • Check that the motor is present during auto-tuning • If an output contactor is being used, close it during auto-tuning • Check that the motor is completely stopped

Fault detection codes that can be cleared with the automatic restart function, after the cause has disappeared

These faults can also be cleared by turning on and off or by means of a logic input (parameter Detected fault reset assignment rSF page 91).

Code	Name	Possible causes	Remedy
LFF1	AI current lost fault	Detection if: • Analog input AI1 is configured as current • AI1 current scaling parameter of 0% CrL1 page 52 is greater than 3 mA • Analog input current is lower than 2 mA	• Check the terminal connection
ObF	Overbraking	• Braking too sudden or driving load too high	• Increase the deceleration time • Install a module unit with a braking resistor if necessary • Check the line supply voltage, to be sure that it is under the maximum acceptable (20% over maximum line supply during run status)
OHF	Drive overheat	• Drive temperature too high	• Check the motor load, the drive ventilation and the ambient temperature. Wait for the drive to cool down before restarting. See Mounting and temperature conditions page 13.
OLC	Process overload	• Process overload	• Check the process and the parameters of the drive to be in phase
OLF	Motor overload	• Triggered by excessive motor current	• Check the setting of the motor thermal protection, check the motor load.
OPF1	1 output phase loss	• Loss of one phase at drive output	• Check the connections from the drive to the motor • In case of using downstream contactor, check the right connection, cable and contactor
OPF2	3 output phase loss	• Motor not connected • Motor power too low, below 6% of the drive nominal current • Output contactor open • Instantaneous instability in the motor current	• Check the connections from the drive to the motor • Test on a low power motor or without a motor: In factory settings mode, motor phase loss detection is active Output Phase loss detection OPL page 94 = YES. To check the drive in a test or maintenance environment, without having to use a motor with the same rating as the drive, deactivate motor phase loss detection Output Phase loss detection OPL = nO • Check and optimize the following parameters: IR compensation (law U/F) UFr page 58, Rated motor voltage UnS page 57 and Rated motor current nCr page 57 and perform an Auto-tuning tUn page 60.
OSF	Main overvoltage	• Line voltage too high: - At drive power on only, the supply is 10% over the maximum acceptable voltage level - Power with no run order, 20% over the maximum line supply • Disturbed line supply	• Check the line voltage

Fault detection codes that can be cleared with the automatic restart function, after the cause has disappeared (continued)

Code	Name	Possible causes	Remedy
PHF	Input phase loss	• Drive incorrectly supplied or a fuse blown • Failure of one phase • 3-phase ATV12 used on a single-phase line supply • Unbalanced load • This protection only operates with the drive on load	• Check the power connection and the fuses. • Use a 3-phase line supply. • Disable the fault by setting Input Phase loss detection IPL page 94 = nO.
SCFS	Load short circuit	• Short-circuit at drive output • Short circuit detection at the run order or DC injection order if parameter IGBT test Strt page 95 is set to YES	• Check the cables connecting the drive to the motor, and the motor's insulation
SLFI	Modbus communication	• Interruption in communication on the Modbus network	• Check the connections of communication bus. • Check the time-out (Modbus time out ttO parameter page 97) • Refer to the Modbus user manual
SLF2	SoMove communication	• Communication interruption with SoMove	• Check the SoMove connecting cable. • Check the time-out
SLF3	HMI communication	• Communication interruption with the external display terminal	• Check the terminal connection
SPIF	PI Feedback detected fault	• PID feedback below lower limit	• Check the PID function feedback • Check the PI feedback supervision threshold LPI and time delay tPI, page 76.
ULF	Process underload fault	• Process underload • Motor current below the Application Underload threshold LUL parameter page 55 during a period set by Application underload time delay ULt parameter page 55 to protect the application.	• Check the process and the parameters of the drive to be in phase
tJF	IGBT overheat	• Drive overheated • IGBT internal temperature is too high according to ambient temperature and load	• Check the size of the load/motor/drive. • Reduce the Switching frequency SFr page 59. • Wait for the drive to cool before restarting

Faults codes that will be cleared as soon as their causes disappear

The USF fault can be cleared remotely by means of a logic input (parameter Detected fault reset assignment rSF page 91).

Code	Name	Possible causes	Remedy
CFF	Incorrect configuration	• HMI block replaced by an HMI block configured on a drive with a different rating • The current configuration of customer parameters is inconsistent	• Return to factory settings or retrieve the backup configuration, if it is valid. • If the fault remains after reverting to the factory settings, contact your local Schneider Electric representative
CFI (1)	Invalid configuration	• Invalid configuration The configuration loaded in the drive via the bus or communication network is inconsistent. The configuration upload has been interrupted or is not fully finished.	• Check the configuration loaded previously. • Load a compatible configuration
CFI2	Download invalid configuration	• Interruption of download operation with Loader or SoMove	• Check connection with Loader or SoMove. • To reset the default re-start the download operation or restore the factory setting
USF	Undervoltage	• Line supply too low • Transient voltage dip	• Check the voltage and the parameters of Undervoltage Phase Loss Menu USb- page 95.

(1) When the CFI is present in the past fault menu, it means the configuration has been interrupted or is not fully finished.

HMI block changed

When an HMI block is replaced by an HMI block configured on a drive with a different rating, the drive locks in Incorrect configuration CFF fault mode on power-up. If the card has been deliberately changed, the fault can be cleared by returning to factory setting.

Fault detection codes displayed on the remote display terminal

Code	Name	Description
In It	On initializing itself	• Micro controller initializing • Communication configuration search
CON. E (1)	Communication error	• It has 50ms time out error. • This message is shown after 220 retry attempts.
A - 17 (1)	Key alarm	• Key has been pressed consecutively for more than 10 seconds. • Membrane switch disconnected. • Keypad woken up while a key is being pressed.
cLr (1)	Confirm Fault reset	• This message appears if the STOP key is pressed when there is a keypad fault.
dEU. E (1)	Drive mismatch	• Drive type (brand) did not match with keypad type (brand)
rOM. E? (1)	ROM abnormality	• Keypad ROM abnormality detected by the checksum calculation.
rAM. E (1)	RAM abnormality	• Keypad RAM abnormality detected.
CPU. E (1)	The other defect	• The other detected fault.

(1) Flashing